

III. *A Revision of the genus Catasarcus.* By FRANCIS P. PASCOE, F.L.S., F.Z.S., &c.

[Read 3rd January, 1870.]

IN the fine collection of *Coleoptera* lately brought by Mr. Du Boulay from Western Australia, chiefly from the neighbourhood of Champion Bay, no genus received so great an accession of new species as *Catasarcus*. By this gentleman's kindness, I have been able to obtain the greater number of them, and, in comparing them with those of the National Collection, and the undescribed species in my own, and with the descriptions of Schönherr, I thought it would be desirable to attempt a revision of the genus so far as my materials would permit.

The first two species were noticed by Boisduval in 1835, who referred them to *Cnecorhinus*. In 1840 Schönherr proposed his genus *Catasarcus* for four species, described by Fahraeus, of which *C. bilineatus* was the type; to these he appended, but as unknown to him, Boisduval's two species; and in 1845 Boheman added another. Germar, three years later, described his *C. transversalis*, and I am not aware that, except in Lacordaire's "Genera," the genus has been in any way noticed since.

But it is in the last-mentioned work that we find the true characters of the genus, and as it is one that must be in every Entomologist's hands, I need not repeat them here. It will only be necessary for me to point out the structure of those parts the modifications of which are supposed to differentiate the species.

The first character which Lacordaire gives "Head depressed in front," although true, is much more marked in some species than in others, a decided convexity being apparent in a few, while others have it almost perfectly flat. The front is always more or less scored by three vertical grooves, bounded by four lines, or carinæ, often very strongly elevated; the outer ones, however, in a few species, are obsolete, or nearly so, and in many the carinæ, with their corresponding grooves, are confined to the lower part of the front, where they are continued into the deep transverse sulcus separating the head from the rostrum; whilst in two or three species a slight line

is apparent, dividing the middle groove into two parts.\* The rostrum has always three carinae on its dorsal surface, the middle one terminating in the triangular basal plate; the scrobes also are bounded beneath by a carina, but none of the characters of the rostrum afford anything peculiar. The only exception to the general form of the eyes occurs in *Catasarcus carbo*, where, instead of being "oval, subdepressed, and acuminate inferiorly," they are perfectly round and prominent. The only part of the antennae requiring notice is the funicle. In this the first joint is generally by far the longest, but in some species the second is nearly as long; the third and following joints are usually only about half as long again as their breadth, but in two or three species this proportion is very considerably exceeded.

The prothorax is always transverse, and marked by two transverse grooves, which generally divide it into three equal parts; the grooves are, however, in some cases very slight.

But the best characters of the species are afforded by the elytra, only, though these are obvious enough to the eye when compared with one another, they are extremely difficult to define; the sculpture is nearly always of the same type, seriate- or sulcate-punctate, with tubercular elevations between; its peculiarities often masked by a covering of scales, the absence of which, in worn individuals, serves to throw a doubt on their identity. More than half the species have the elytra armed with spines, comparatively of very large size; these are generally four in number, exclusive of the "spiniform tubercle" (post-humeral spine), placed a short distance behind the shoulder, which is common to the whole genus. The first pair (median) are generally near the middle of the elytra, calculating the middle from a line extending *over* the length of the back, the second (posterior) a little behind them, and invariably nearer the suture. Another set of species has an additional pair of spines near the base, these have always a smaller pair placed a little outside the median (medilateral). But in *Catasarcus concretus*, we find these medilateral spines without the basal.

The legs and under surface of the body are very homogeneous; the former are most commonly of a reddish

\* I doubt, however, whether this line is always present in the same species.

colour, clothed with scattered scales, mixed with setæ on the lower portions of the tibiæ and on the tarsi.

A very peculiar substance, which the French call "enduit," probably from the Latin "indumentum," for which we have no corresponding term, but which I have mentioned as "a sort of exudation" is found in a few species. Two have it in the form of small grains as if sprinkled with sand, and two others have a waxy varnish, which, however, appears to be a part of the true integument.

The greater part of the species of *Catasarcus* are found in Western Australia. I only know of one (*C. transversalis*) from South Australia, one (*C. memnonius*) from Victoria, and two (*C. ovinus* and *C. concretus*) from Queensland. Probably a longer list could be given by the Australian Entomologists, and I hope they will not long delay to do so. Mr. Du Boulay tells me that each species appears to affect a particular shrub or tree. I believe nothing is known of their earlier stages.

There are thirty-four new species described in these pages; some individuals which I have placed as varieties might no doubt be considered "good species," but this is one of those genera which prove how much more difficult it is to determine the limits of species than the limits of genera.

The sexual differences appear to be very slight. The male is a little smaller, and is narrower behind than the female, the elytra curving inwards very perceptibly towards the apex. It is only a few of the species, however, that we are able to pair.

I have divided the genus into three sections, and have given a table of the species under each.

## Gen. CATASARCUS, Schönherr, Curcul. v. 812.

### Section 1.

#### *Elytra without dorsal spines.*

- |     |  |                              |
|-----|--|------------------------------|
| a   | Suture with a line of condensed scales.                              |                              |
| b   | Front convex . . . . .   | <i>C. bilineatus</i> , Fahr. |
| b b | Front flat. . . . .  | <i>C. suturalis</i> , n. sp. |
| a a | Suture concolorous.  |                              |
| c   | Oval, and more or less oblong.                                       |                              |
| d   | Spaces between the punctures on the elytra<br>ridged or tuberculate. |                              |
| e   | Moderately convex above.   |                              |
| f   | Ridges on the elytra finely and closely<br>tuberculate . . . . .     | <i>C. opimus</i> , n. sp.    |

- f f* Ridges on the elytra not closely tuberculate.  
*g* Ridges very irregular or zig-zag . . . *C. rufipes*, Fahr.  
*g g* Ridges transverse.  
*h* First and second joints of funicle subequal *C. griseus*, n. sp.  
*h h* First joint of the funicle much longer than the second.  
*i* Prothorax at the base more than twice as broad as long . . . . . *C. Hopii*, Fahr.  
*i i* Prothorax at the base less than twice as broad as long . . . . . *C. longicornis*, n. sp.  
*e e* Strongly convex above.  
*j* Punctures on the elytra divided by elevated ridges . . . . . *C. effloratus*, n. sp.  
*j j* Punctures on the elytra divided by flattish ridges . . . . . *C. vinosus*, n. sp.  
*d d* Spaces between the punctures on the elytra not ridged.  
*k* Elytra sulcate-punctate.  
*l* Four well-marked frontal carinæ . . . . . *C. pollinosus*, n. sp.  
*l l* Two intermediate carinæ obsolete . . . . . *C. ceratus*, n. sp.  
*k k* Elytra seriate-punctate.  
*m* Punctures on the elytra glabrous . . . . . *C. foveatus*, n. sp.  
*m m* Punctures on the elytra filled with yellow scales . . . . . *C. maculatus*, n. sp.  
*c c* Shortly ovate.  
*n* Front of the head short.  
*o* Carina near the eye distinct . . . . . *C. transversalis*, Germ.  
*o o* Carina near the eye obsolete . . . . . *C. memnonius*, n. sp.  
*n n* Front of the head longer . . . . . *C. ovinus*, n. sp.

## Section 2.

*Elytra with four dorsal and two post-humeral spines.*

- a* Median spines placed nearer the base than the apex.  
*b* More or less scaly.  
*c* Carina near the eye obsolete . . . . . *C. araneus*, n. sp.  
*c c* Carina near the eye well-marked.  
*d* Head and rostrum broad . . . . . *C. bellicosus*, n. sp.  
*d d* Head and rostrum narrower . . . . . *C. echidna*, n. sp.  
*b b* Glairy above, as if varnished . . . . . *C. albuminosus*, n. sp.  
*a a* Median spines placed nearer the apex.  
*e* Median spine reduced to a small conical point . . . . . *C. intermedius*, n. sp.  
*e e* Median spine large.  
*f* Prothorax narrower at its base than at its middle.  
*g* Elytra in parts without scales.  
*h* Eyes round, prominent . . . . . *C. carbo*, n. sp.  
*h h* Eyes narrowed, flat . . . . . *C. albisparsus*, n. sp.

- g g Elytra densely scaly.
- i Elytra short, subcordiform . . . . *C. marginispinis*, n. sp.
- i i Elytra longer, ovate.
- j Rostrum shorter than the head.
- k Scales on the elytra mingled with a sand-like exudation, and with few very small setæ posteriorly . . . . *C. capito*, n. sp.
- k k Scales on the elytra adpressed, with thick black setæ posteriorly, issuing from small naked points . . . . *C. ochraceus*, n. sp.
- j j Rostrum as long as the head . . . *C. cicatricosus*, n. sp.
- f f Prothorax as broad at the base or broader than at the middle.
- l Posterior spines stout, broad at the base.
- m Head bounded at the sides between the eye and the transverse sulcus by a well-marked carina.
- n Elytra scaly.
- o Prothorax more than twice as broad as long *C. brevicollis*, n. sp.
- o o Prothorax less than twice as broad as long.
- p Elytra with rows of glossy tubercles . . . *C. nitidulus*, n. sp.
- p p Elytra with transverse ridges . . . *C. humerosus*, n. sp.
- n n Elytra with a few straggling scales only *C. funereus*, n. sp.
- m m Head with scarcely any carinæ in front *C. spinipennis*, Fahr.
- l l Posterior spines more slender, not so broad at the base.
- q With whitish scales, more or less condensed *C. ericius*, n. sp.
- q q With very minute scattered scales, generally distributed . . . . *C. scordalus*, n. sp.

## Section 3.

*Elytra with more than four dorsal spines, exclusive of the post-humeral.*

- a With two sub-basal spines, four median, and two posterior.
- b A line of tubercles between the suture and first row of punctures . . . . *C. tribulus*, n. sp.
- b b No line of tubercles between the suture and first row of punctures.
- c Scales on the elytra unicolorous . . . *C. trapa*, n. sp.
- c c Scales on the elytra forming whitish lines on the sides.
- d Scales mixed with a sand-like exudation *C. furfuraceus*, n. sp.
- d d Scales unmixed with any exudation . . . *C. lepidus*, n. sp.
- a a Without sub-basal spines . . . . *C. concretus*, n. sp.

The two following are unknown to me, and do not occur in the above list of species.

*Catasarcus stigmatipennis.*

*Cncorhinus stigmatipennis*, Boisduval, Voy. de l'Astrol.  
ii. 349.

A narrower species than *Cn. impressipennis*\* of the same author, which is the same as *Cat. rufipes*, according to Lacordaire. It is entirely ashy above, with nine rows of large distinct punctures on each elytron. It is from "Port Western."

*Catasarcus rugulosus.*

Boheman, in Schönh. Curcul. VIII. ii. 380.

This species is said to be the size of *Hypera punctata*, with the front not canaliculate, but it is afterwards stated to be briefly canaliculate at the apex. It is differentiated from *C. Hopii* by the rostrum "otherwise sculptured," but its description conveys no definite idea of anything apart from the general characters of the genus, and I am unable to arrive at any conclusion as to the real distinction between them. I fancy almost every collection contains something standing under this name.

Section 1.

Elytra without dorsal spines.

1. *Catasarcus bilineatus.*

Fahraeus, in Schönh. Curcul. v. 813.

An easily recognized species, on account of the dense broad line of scales along the suture.

2. *Catasarcus suturalis.*

Ovate, black, nitid, nearly glabrous; head quite flat in front, the lateral carinae narrow and prominent, the intermediate nearly obsolete, with a slight groove between them; rostrum shorter than in *C. bilineatus*, the median

\* Boisduval, *lib. cit.* p. 350, pl. vii. fig. 9. This figure shows a much longer prothorax than any *Catasarcus* I have seen.

carinæ arched in the middle, the spaces between the carinæ, especially on the head, covered with pale yellowish-gray scales; prothorax apparently glabrous, but under a lens, a few minute obliquely placed hairs are visible, above finely and irregularly granulate, its length more than half its breadth at the base; scutellum minute, glabrous; elytra sulcate-punctate, the punctures approximate, well-marked, the intervals forming regular tuberculate elevations, entirely glabrous, except a narrow line of pale yellowish-gray scales along the suture; body beneath, black with small scattered scales, here and there a little more condensed; legs bright brownish-red, a few fine hairs at the ends of the tibiæ, and on the tarsi; antennæ dark ferruginous, the funicle moderately elongate.

Length 5 lines.

*Hab.*—Western Australia (Perth).

This is a nearly glabrous species, on the upper part at least, except the narrow line along the suture, and with the front of the head perfectly flat; in *C. bilineatus*, the front rises towards the central groove on each side.

### 3. *Catasarcus opimus*.

Very broadly oval, dark brown or black, covered with pale yellow or yellowish-gray scales; head distantly, almost obsoletely, punctured above, a narrow longitudinal triangular elevation between the eyes, terminating below in a short groove, the groove near the eye on each side as well as the two rostral ones broader than usual; eyes narrow, very decidedly pointed below; prothorax small, short, deeply emarginate at the apex, finely and transversely tuberculate above; scutellum small, triangular; elytra rather lightly seriate-punctate, the intervals broad, finely and irregularly tuberculate, the punctures round, shallow, filled up with scales nearly to the level of the surrounding parts, and closely approximate in the longitudinal direction; beneath more or less scaly, the first two abdominal segments finely granulate; legs reddish, or reddish-ferruginous, with minute dispersed scales, knees black, tarsi brown; antennæ slender, all the joints of the funicle elongate, the second only a little shorter than the first.

Length 5-8 lines.

*Hab.*—Western Australia.

A broad handsome species, varying considerably in size; the elytra covered with numerous fine tubercles, amongst which the shallow punctures filled with pale lemon or grayish scales are very marked, notwithstanding that the punctures themselves, in rubbed specimens, are very indefinite.

#### 4. *Catasarcus longicornis*.

Oblong ovate, moderately convex, glossy black, with grayish scales limited to the impressed parts; head with a vertical prominence in front, divided below into two carinæ, the outer carina on each side, as well as those on the rostrum, well-marked; the grooves, except the median one on the front, filled with scales; prothorax rather long, well rounded at the sides, and slightly contracted at the base, which is, however, much broader than the apex, rather finely and somewhat transversely corrugate above; scutellum very distinct; elytra closely striate-punctate, the punctures large, mostly much broader than long, filled with grayish-white scales, the intervals forming narrow glossy transverse ridges, post-humeral tubercle obsolete; body beneath black, rather closely covered with oblong grayish scales, but darker on the last three segments; legs reddish-ferruginous, glossy, with few scales, the knees and tarsi blackish; antennæ slender, glossy ferruginous, more or less covered with minute whitish scales, funicle with all the joints elongate, but so far as the penultimate gradually shorter, club rather short, dark brown, pubescent.

Length 5-5½ lines.

*Hab.*—Champion Bay.

This species bears a close resemblance to *C. Hopii*, but it is much more elongate, the prothorax considerably longer in proportion, much more rugose, and, above all, the antennæ are differently modified; in *C. Hopii* the funicle is short, with the last five joints not much longer than broad, although a very gradual shortening may be traced to the last, and the third joint scarcely half as long as the second; while in this species, all the joints from the third inclusive, are nearly twice as long as the corresponding ones in *C. Hopii*.



5. *Catasarcus vinosus*.

Moderately ovate, very convex, black, subnitid, with roseate or pinkish scales, more or less scattered except in the impressed parts; head slightly convex in front, four strongly marked carinæ, the two intermediate stouter than the lateral, and without scales between them; prothorax short, moderately transverse, minutely punctured, the intervals delicately granulate, scales minute, and very much scattered; scutellum very distinct, small, triangular; elytra extending slightly beyond the prothorax at the base, sulcate-punctate, the punctures large, shallow, filled with rose-coloured scales, the intervals slightly elevated, flattish, post-humeral spine short, obtuse; beneath blackish, partially scaly; legs reddish, clothed with small whitish scales and setæ; antennæ brownish-ferruginous, minutely scaly, second joint of the funicle considerably shorter than the first.

Length 5 lines.

*Hab.*—Champion Bay.

A more than usually convex species, and from the colour of its scales, a somewhat remarkable one.

6. *Catasarcus effloratus*.

Rather broadly oval, strongly convex, black, shining, with golden yellow scales confined to the impressed parts; head rather convex in front, four strongly-marked carinæ, the two intermediate much stouter than the lateral, the narrow groove between them not scaly, the outer grooves and the two on the rostrum filled with golden yellow scales; prothorax short, not very transverse, finely punctured and nearly naked above, the intervals irregularly and slightly raised; scutellum small; elytra projecting beyond the prothorax at the base, sulcate-punctate, punctures somewhat and here and there distinctly hexagonal and transverse, the intervals narrow, and, in the transverse direction forming regular strongly elevated polished ridges, post-humeral spine large, slightly recurved; beneath black, scales much dispersed; legs dark reddish, with minute scattered scales and setæ; antennæ dark brownish-ferruginous, the funicle with the joints gradually and regularly shorter to the seventh.

Length 6 lines.

*Hab.*—Champion Bay.

The prothorax in this species is not so finely punctured as in the last, and is much exceeded at the base by the elytra; the latter are also very convex, and much more strongly sculptured.

7. *Catasarcus rufipes*.

Fahraeus, in Schönh. Curcul. v. 814.

A somewhat depressed, oblong ovate species, which M. Lacordaire thinks should be referred to *Oncorhinus impressipennis*, Boisd. Voy. Astrol. ii. 350.

8. *Catasarcus Hopii*.

*C. Hopei*, Fahraeus, in Schönh. Curcul. v. 815.

In this species, the head has, in front, four well-marked equidistant carinæ, although the central groove is much narrower than the lateral ones, owing to the sloping towards each other of the two intermediate carinæ. Fahraeus's diagnosis in Schönherr is a little ambiguous; the rostrum is said to have three grooves at the base, and two at the apex; the former of these statements applies, apparently, to the front of the head, and the description, after giving the frontal grooves, seems to have gone back to them in treating of the rostrum.

9. *Catasarcus griseus*.

Oblong oval, black, covered with grayish scales, having, under the lens, a slight rosy hue, and more condensed in parts; head with four well-marked carinæ in front, the two intermediate parallel and rather approximate, the grooves, except the middle one, filled with scales, rostrum narrower than the front, the middle carina narrow throughout; prothorax rather short, finely granulate, on each side a broad distinct stripe of closely set scales, separated by a narrow median line of scattered scales; scutellum small, triangular; elytra sulcate-punctate, punctures broad, more or less coalescing at the sides, the transverse intervals forming rather narrow elevated ridges, post-humeral spine shortly conical; body

beneath closely scaly; legs reddish, with rather close-set grayish scales; antennæ brownish-ferruginous; the first joint of the funicle very little longer than the second, from the second to the sixth comparatively long, but gradually diminishing, club oblong-ovate.

Length 4 lines.

*Hab.*—Western Australia.

A small, rather narrowly oval, almost elliptic, species: unusually scaly, but with the prothorax striped, owing to the paucity of the scales along the median line. In one of my specimens, the last joint of the funicle is decidedly pyriform; in the other, which is probably the female, it is shortly obconic.

#### 10. *Catasarcus pollinosus*.

Moderately oval, more convex posteriorly, black, partially scaly, having an ashy waxy appearance above; head convex in front, four very stout prominent carinæ, all of equal length, the two intermediate incurved and meeting directly above the transverse sulcus; rostrum strongly grooved, the grooves, as well as those on the head, slightly scaly; prothorax moderately transverse, slightly rounded at the sides, the base slightly contracted, but much broader than the apex, irregularly punctured above, the punctures small, each with a single grayish hair-like scale at its base, the intervals having a slightly granulate character; scutellum indistinct; elytra substriate-punctate, the punctures round, small, remote, and including a patch of minute yellowish scales, the intervals of the punctures apparently flattish, but slightly tuberculate under a strong lens, with small very distinct glossy black spots apparently embedded in the waxy surface; beneath blackish, legs dark ferruginous, both sprinkled with small hair-like yellowish scales; antennæ moderate, the three penultimate joints of the funicle turbinate, the last triangular, club dark brown, the rest of the antennæ ferruginous.

Length  $6\frac{1}{2}$  lines.

*Hab.*—Western Australia.

This species is very distinct. The peculiar waxy appearance is not an exudation to be rubbed off, but is a part of the tegument itself.

11. *Catasarcus ceratus*.

Broadly oval, moderately convex, black, nearly glabrous, except a few hair-like scales at the sides and beneath, having a leaden waxy appearance above and on the legs; head convex in front, a strong carina on each side near the eye, and two intermediate shorter ones directly above the transverse sulcus; rostrum longer than the head; prothorax short, nearly twice as broad at the base as long, the sides strongly rounded, the base very considerably broader than the apex, transversely and finely corrugate except anteriorly; scutellum small, triangular; elytra substriate-punctate, the intervals very broad, flattish, finely and very irregularly tuberculate, the punctures small, round, shallow, and remote; legs dark leaden ferruginous, knees black, tarsi nearly black; antennæ slender, all the joints of the funicle unusually elongate, the second as long as the first, club narrow, elongate.

Length 8 lines.

*Hab.*—Western Australia.

The greater part of the above characters mark this species off as one of the most distinct of the genus.

12. *Catasarcus foveatus*.

Narrowly ovate, moderately convex, glossy brownish-black, nearly without scales; head slightly convex in front, four strongly-marked carinæ, all a little incurved at the transverse sulcus, the two intermediate nearer the lateral ones than to each other, but approximate below, the carinæ on the rostrum also well-marked, the intermediate one glabrous, narrower below, their grooves with a few longer punctures; prothorax not very short, the apex nearly as broad as the base, finely and regularly granulate above; scutellum small, triangular; elytra seriate-punctate, punctures large, round, with a very few whitish scales at the bottom; the fourth and following outer rows with the foveæ considerably larger than the three inner rows, the intervals flattish, rather broad, with small nearly obsolete punctures, post-humeral spine short, thick; beneath black, with a few hair-like scales regularly dispersed; legs reddish-ferruginous, tarsi blackish; antennæ brownish-ferruginous, the last four joints of the funicle longer than broad, turbinate, the last joint the longest.

Length 5 lines.

*Hab.*—Champion Bay.

The punctures on the elytra of this species are large enough to be called foveæ, and this peculiarity, with the broader intervals between them, or, in other words, their fewness, make this one of the best marked species of the genus.

13. *Catasarcus maculatus*.

Oblong oval, or nearly elliptic, black, scarcely shining; head between the eyes, and rostrum, of equal breadth, the former with four strongly-marked carinæ in front, the two intermediate stouter, the outer groove on each side, and those on the rostrum, filled with yellow scales; prothorax moderately transverse, rather long, gradually broader to the middle at the sides, then straight to the base, the two transverse grooves nearly obsolete, very regularly and minutely granulate above, and speckled with small yellow scales and setæ; scutellum very small; elytra slightly convex, seriate-punctate, the punctures pentagonal, largest at the sides, filled with close-set yellow scales, the intervals apparently flat and glabrous, under a powerful lens they are seen to be slightly rugose, and closely covered with a fine tomentose pubescence, post-humeral spine very small; body beneath black, with yellow scales; legs brownish-red, with very small scattered yellow hairs; antennæ reddish-brown, with black setæ, the first joint of the funicle not much longer than the second.

Length 6 lines.

*Hab.*—King George's Sound.

This is an exceedingly well-marked species, and not uncommon in collections.

14. *Catasarcus transversalis*.

Germer, Linn. Entom. iii. 212.

Shortly ovate, black, with a few grayish-white scales in the impressed portions; prothorax nearly glabrous, a few very nearly obsolete punctures only, lying between the broadly impressed transverse grooves.

Length 4 lines.

*Hab.*—Adelaide, and Champion Bay.

15. *Catasarcus memnonius*.

Shortly ovate, black, nitid, without any scales; front short, obscurely marked with five grooves, a median, and two approximate ones on each side, the carina near the eye obsolete; rostrum with a somewhat circular impression on the basal half; prothorax short, transversely tuberculate, the tubercles flat, smooth, much broader than long, no punctures, and scarcely grooved, or the anterior transverse groove very faintly marked; scutellum equilaterally triangular; elytra transversely grooved at the sides, but somewhat seriate-punctate towards the suture, the punctures very indeterminate, the intervals irregularly tuberculate, the tubercles arranged in longitudinal rows, post-humeral spine stout, conical; body beneath, dark pitchy, a patch of white scales on each side of the metasternum; abdomen finely granulate; legs and antennæ reddish-pitchy, with blackish setaceous hairs.

Length 4 lines.

*Hab.*—Victoria.

Germar's description of his *C. transversalis*, in regard to the prothorax "*Vage et rugoso-punctatus*," scarcely agrees with what I take for it, unless we suppose that the roughness applies to the irregular surface of the prothorax caused by the transverse grooves; in *C. memnonius*, the direction of the impressions on the elytra appears to vary according to the position in which it is viewed, but the tubercles have less of the longitudinal arrangement, and there are no scales whatever in the grooves.

16. *Catasarcus ovinus*.

Shortly ovate, black, covered with grayish scales; front above the transverse sulcus elongate, with four long well-marked carinæ; rostrum with the central carina gradually broader beneath, gradually passing into the triangular apical plate; prothorax rather short, the scales slightly condensed at the sides; scutellum very small, equilaterally triangular; elytra seriate-punctate, the punctures large, shallow, and distinctly limited, the intervals transversely tuberculate; body beneath, and legs,

closely scaly, the latter reddish-brown; antennæ ferruginous-brown, the first joint of the funicle considerably longer than the second, the remainder, to the sixth, gradually shorter, the last longer and broader.

Length  $4\frac{1}{2}$  lines.

*Hab.*—Queensland.

This species has a considerable resemblance to *C. griseus*, but, *inter alia*, the larger punctuation of the elytra affords a ready differentiation.

## Section 2.

Elytra with four dorsal spines.

### 17. *Catasarcus intermedius*.

Rather shortly ovate, black, with a few scales chiefly confined to the impressed portions; head flat in front, but with three well-marked carinæ, the median the longest, the others near the eye on each side; prothorax rather short, scarcely rounded at the sides, irregularly tuberculate, the posterior transverse groove nearly median; scutellum indeterminate; elytra transversely grooved, the intervals coarsely tuberculate with shallow longitudinal impressions dividing them, post-humeral spine short, obtuse, posterior pair of spines rather small, slightly incurved, the median very small, conical, and more at the side than in front of the posterior, both pairs placed unusually far from the base; body beneath, antennæ, and legs, dark ferruginous-brown, the last with rather longer setaceous black hairs.

Length  $3\frac{1}{2}$ -4 lines.

*Hab.*—Champion Bay.

The transverse grooves on the elytra are only a modified form of punctuation, the punctures being broadly impressed and uniting at the sides. This species, in the smallness of its median and posterior spines, and their remoteness from the base of the elytra, may be considered as forming a passage between the normal and the spine-bearing members of the genus.

11. *Catasarcus bellicosus*.

Ovate, black, nitid, with scattered grayish scales, chiefly in the impressed parts; head flat in front, with four well-marked carinæ, and another, short but very distinct above, slightly descending into the middle groove, the grooves, as well as those on the rostrum, nearly without scales: prothorax rather short, moderately rounded at the sides, not broader at the base than in the middle, irregularly tuberculate, the two transverse grooves very distinct; scutellum small, triangular; elytra seriate-punctate, the punctures shallow, but here and there deeper at the sides, occasionally partially confluent, the intervals irregularly raised, but only slightly tuberculate, post-humeral spine rather prolonged, conical, the median pair before the middle, and the posterior well developed; body beneath black, with long hair-like, mostly scattered, scales; legs and antennæ ferruginous, with dispersed setaceous hairs, the first joint of the funicle nearly twice as long as the second, the latter a little longer than the third.

Length  $3\frac{3}{4}$ - $4\frac{1}{2}$  lines.

*Hab.*—Western Australia.

I have several specimens of this species, all with very few scales, or to the eye perfectly glabrous; such is probably, therefore, its normal condition.

19. *Catasarcus echidna*.

Ovate, black, with grayish scales principally in the impressed parts; head and rostrum narrower than in *C. bellicosus*, the carina near the eye well-marked, the intermediate broadly rounded; prothorax short, moderately transverse, obtusely tuberculate; scutellum small, triangular; elytra subseriate-punctate, many of the punctures confluent, the spaces between them here and there raised in a transverse direction, others slightly tuberculate, post-humeral spine rather stout, black, the median and posterior glossy reddish ferruginous, the former præmedian, the latter more than twice as long and slightly recurved; body beneath black, with grayish scales; legs pale reddish-brown, with a few minute scales only on the tibiæ and tarsi, and with scattered setæ; antennæ brownish, funicle with the first joint twice as long as the second, which is not much longer than the third.

Length  $3\frac{3}{4}$  lines.



*Hab.*—Champion Bay.

Closely allied to *C. bellicosus*, but, owing to the more numerous scales, apparently very different. The head and rostrum are, however, narrower, and the grooves are well filled with rounded scales.

20. *Catasarcus araneus*.

Ovate, pitchy-brown, covered with numerous pale gray scales; head flat in front, two well-marked intermediate carinæ, those at the sides commencing below the eyes; prothorax short, slightly rounded at the sides, broadest at the base, not tuberculate above, the two transverse grooves very distinct; scutellum small, triangular; elytra seriate-punctate, the punctures small, shallow and indistinctly limited, the intervals not tuberculate, post-humeral spine rather short, median and posterior spines moderate, the former præmedian; body beneath closely covered with grayish scales; legs ferruginous, the scales more dispersed, and mixed with blackish setæ on the tibiæ; antennæ ferruginous, the funicle, especially the first joint, shorter than usual.

Length  $3\frac{1}{2}$  lines.

*Hab.*—Champion Bay.

There is no carina bordering the inner margin of the eye in this species.

21. *Catasarcus albuminosus*.

Oblong-ovate, yellowish-brown, the upper surface having a glairy appearance of a paler hue; head flattish in front, four oblong protuberances above the transverse sulcus, and in the cavity formed by the two central ones, a narrow well-marked carina, an oblong curved impression beneath the eye, the latter nearly round; prothorax short, moderately transverse, opaque, marked with two indistinct transverse grooves, the intervals impunctate and without tubercles; scutellum triangular, indeterminate; elytra striate-punctate, the punctures strongly impressed and gradually larger to between the posterior spines, those at the sides also larger and more or less subquadrate, post-humeral spine sharply conical, the median and posterior longer and stouter than usual, the latter pair slightly recurved; body beneath, blackish; legs ferruginous, but clothed with dispersed grayish hair-like scales; antennæ glossy ferruginous, the club dull brownish, last five joints of the funicle of nearly equal length.

Length  $3\frac{3}{4}$  lines.

*Hab.*—Champion Bay.

There is no appearance of scales on the upper surface of this species, which is a very remarkable one, on account of its smooth, somewhat varnished look, including also the spines.

## 22. *Catasarcus nitidulus*.

Moderately ovate, black, with scattered grayish scales; head flat in front, three tolerably well-marked grooves above the transverse sulcus, bounded by four stout prominent carinæ, all covered, as well as the rostral grooves and carinæ, with yellowish-gray scales; prothorax short, moderately transverse, well rounded at the sides, the apex much narrower than the base, obtusely tuberculate and partially glossy above, the sides and the two transverse grooves scaly; scutellum larger than usual, very distinct, triangular; elytra sulcate-punctate, the punctures small, filled with scales, the intervals raised, and forming close-set rows of glossy granuliform tubercles, post-humeral spine black, the median and posterior glossy brownish-red, the former scarcely a third so long as the latter, sides along the outer margin densely scaly, shoulders not broader than the base of the prothorax, produced into a stout obtuse conical tubercle; body beneath, black, partially scaly; legs brownish-red, with much-scattered hair-like scales and setæ; antennæ reddish-ferruginous, finely scaly, with a few black setæ, club short, black, pubescent.

Length 4 lines.

*Hab.*—Swan River.

This species may be considered as most allied to *C. spinipennis*, from which it will, however, be at once distinguished by its carinate front.

## 23. *Catasarcus humerosus*.

Stoutly ovate, black, with thinly set dull grayish scales; head flattish in front, with four short moderately prominent carinæ, covered as well as the rostrum with small dispersed scales, among which are mixed long flattish setæ; rostrum narrower than the front; prothorax short,

slightly rounded at the apex, the sides anteriorly moderately rounded, then straight to the base, the two transverse sulci broad and distinct, the rest not tuberculate; scutellum indistinct; elytra sulcate-punctate, the intervals transversely ridged, posteriorly the scales mixed with numerous small projecting setæ, post-humeral spine large, median and posterior rather short, stout, shoulders much broader than the prothorax at the base, produced into a short sharp conical point; beneath, dull black, with small scales; legs reddish-brown or dark brown, with long scattered setæ, some of them black, especially on the tibiae and tarsi; antennæ dark ferruginous, the club darker, funicle moderately long, with a few black setæ.

Length 4-5 lines.

*Hab.*—Western Australia.

This appears to be a common species and pretty generally distributed in Western Australia. It is in general appearance like *C. funereus*, but more scaly, and with elytra that may almost be said to be transversely sulcate.

#### 24. *Catasarcus funereus*.

Moderately ovate, black, with minute scattered grayish scales; head not longer than the rostrum, rather narrow and flattish in front, with four short tolerably well-marked carinæ directly above the transverse sulcus; prothorax twice as broad at the base as long, moderately rounded at the sides, sub-reticulately tubercled above; scutellum very small; elytra sulcate-punctate, the intervals strongly tuberculiform and slightly connected transversely, post-humeral spine elongate and acute, median spines rather remote from the suture, the posterior stout at the base and scarcely elongate, the shoulders produced into a short porrect tubercle; body beneath, black, legs and antennæ ferruginous, a few regularly arranged ochraceous scales on the femora.

Length 5 lines.

*Hab.*—Champion Bay.

A dull blackish species like *C. humerosus*, but with a narrower head, a more rugose prothorax, and the tuberculation of the elytra less, or only slightly, transverse.

25. *Catasarcus spinipennis*.

Fahraeus, in Schönh. Curcul. v. 817.

I have only been able to find one specimen to which I think the following of Fahraeus's characters will apply—" fronte depressa, rugosa, griseo-squamosa, vix carinata," as to the sides of the prothorax " pone medium fore parallelis," and as to the elytra " striis in disco flexuosis;" all the rest are characters either common to many species, or which may be expected to vary.

26. *Catasarcus brevicollis*.

Oblong oval, glossy black, mostly covered with grayish-white scales; head flat in front, three well-marked grooves above, the outermost bounded by a slender carina between the eye and the transverse sulcus, the eyes oblong, somewhat prominent; prothorax short, gradually broader towards the base, where it is twice or more as broad as long, granulately tuberculate above, the anterior transverse groove and sides densely covered with whitish scales; scutellum indistinct; elytra sulcate-punctate, the intervals tuberculiform, and more glossy and prominent towards the base, the shoulders with a short tubercle, otherwise scarcely projecting beyond the prothorax, post-humeral spine stout, black, median and posterior glossy reddish-brown, stoutly conical, clothed with a few scattered black bristles; body beneath, mostly covered with yellowish-gray scales; legs ferruginous, with small dispersed scales, those on the femora hair-like; antennæ slender, ferruginous, scaly, the club blackish, pubescent, funicle with the second joint much longer than the third.

Length 5 lines.

*Hab.*—Champion Bay.

The outline of this species is more elliptic or oval than ovate, partly owing to the breadth of the prothorax near the base.

27. *Catasarcus marginispinis*.

Shortly ovate, pitchy, covered with approximate pale ashy scales; head broad and moderately convex in front, everywhere closely scaly, many of the scales fawn-coloured, with black recurved setæ at intervals, no

carinæ, but a short narrow median impression above the transverse sulcus; rostrum much narrower than the head, covered with scales; eyes rather large, narrow; prothorax moderately transverse, rounded at the sides, not tuberculate above, the two transverse grooves well marked at the sides, but nearly interrupted along the median line; scutellum very small, broadly triangular; elytra subcordiform, subsulcate-punctate, the punctures round, with their interspaces elevated and somewhat tuberculiform, two minute tubercles on each side of the scutellum at the base, post-humeral spines small, slender, acute, the posterior comparatively short, the median about half their size, all black, but partially covered with scales and with black setæ; body beneath, pitchy, legs reddish, both pretty closely covered with ashy scales; antennæ dark ferruginous, the scape and funicle very scaly, with a few long black setæ here and there, the club dark brown, pubescent.

Length  $3\frac{1}{2}$  lines.

*Hab.*—Champion Bay.

This is a short thick species, like *C. concretus*, but with the elytra more cordiform. My specimen has two broad dark stripes on each side the median line of the prothorax, owing to the scales being very much scattered. The disposition of the scales on the spines gives the latter the appearance, when viewed under an ordinary lens, of being margined (with black); they are, however, pretty regularly distributed.

## 28. *Catasarcus capito*.

Oblong ovate, black, with scattered grayish scales, and partial lines and bars of chalky-white scales (under a strong lens of a pearly hue); head broad, convex in front, the vertex and a stripe in front of dark fawn-coloured scales, a narrow median groove above the transverse sulcus, no carina; rostrum shorter than the head; prothorax moderately transverse, the sides slightly rounded, the base and apex of nearly equal breadth, a stripe in the middle and sides of chalky scales, the two transverse grooves distinct, the intervals not tuberculate; scutellum narrowly triangular towards the apex; elytra more or less covered with sand-like exudations,

sulcate-punctate, the punctures rather large and shallow, the intervals tuberculiform, the suture and base marked with short chalky stripes becoming more patchy at the sides, the shoulders not produced and scarcely extending beyond the base of the prothorax, post-humeral spine thick, obtuse, median and posterior short, stout, clothed with sparse grayish hairs, the posterior nearly twice the size of the median; body beneath, and legs, covered with white scales, but more sparingly on the legs, which are of a reddish colour; antennæ dull ferruginous, funicle slender, club small and dark brown.

Length 5 lines.

*Hab.*—Champion Bay.

This species has the elytra, especially posteriorly, sprinkled over with very small granules resembling fine sand, which gives them a roughish appearance.

#### 29. *Catasarcus ochraceus*.

Moderately ovate, black, closely covered with small scales, mostly of a silvery gray, except on the elytra; head convex in front, with three shallow grooves converging at the transverse sulcus, and without any carina, rostrum with a narrow central carina, those at the sides rounded, both head and rostrum clothed with yellowish-gray scales, except the vertex and median stripe in front which are grayish-black; prothorax moderately transverse, equally rounded at the sides, the apex not much narrower than the base, short stiff setæ scattered amongst the scales, which are mostly pale grayish when viewed under the lens, with a central stripe and a band in the anterior transverse groove at the sides, ochraceous; scutellum transversely triangular; elytra rather strongly sulcate-punctate, the intervals tuberculate, densely covered with ochraceous scales, the sides from the post-humeral spine pale ashy, the median and posterior spines glossy reddish, the post-humeral long and black; body beneath black, with pale scales having small punctiform spaces amongst them, in each of which is a longish seta; legs reddish, with pale grayish scales, accompanied with numerous black setæ on the tibiæ and tarsi; antennæ slender, dark brown, with pale scales and black scattered setæ.

Length 5 lines.

*Hab.*—Champion Bay.

The elytra of this species are closely covered with scales of a clear ochre-yellow, except a broad abbreviated stripe of pale ashly at the side. The frontal grooves in this and some of the following species are almost obsolete, the middle one only showing itself as a sort of notch directly above the transverse sulcus.

### 30. *Catasarcus albisparsus*.

Moderately ovate, glossy black, with condensed patches of pure white scales; rostrum with four short stoutish ridges above the transverse sulcus; eyes oblong, pointed below, the lower border, and the cheeks, white; prothorax narrowly transverse, two broad irregular grooves on each side, the anterior one at the base filled in with a line of snowy scales, a similar line extending behind it; scutellum broadly triangular, depressed; elytra seriate-punctate, the punctures large, more or less confluent transversely, the interspaces forming well-marked transverse ridges, which, however, disappear posteriorly, a short line on the suture, patches at the sides, and some of the punctures behind scaly white, the rest of the elytra glabrous, post-humeral spine straight, black, median and posterior pairs glossy reddish, the latter nearly as large and as long again as the former; body beneath black, with pure white scales more or less interrupted, sides of the first abdominal segment marked with a few black granules; legs reddish, femora with scattered hair-like scales, tibiæ and tarsi with dispersed white scales; antennæ slender, ferruginous, nearly without scales, club dark brown.

Length 4 lines.

*Hab.*—Champion Bay.

A pretty little species, well distinguished by its patches of chalky-white scales, contrasted, especially on the elytra, with the glabrous glossy black.

### 31. *Catasarcus carbo*.

Oblong ovate, black, subnitid, with whitish minute scales in the cavities; head convex in front, without carinæ, a short deep groove above the transverse sulcus, bounded on each side by a prominent tuberculiform

process; eye perfectly round and prominent; prothorax rather narrow, rounded at the sides, contracted at the base, which is very little broader than the apex, irregularly tuberculate above; scutellum small, triangular; elytra sulcate-punctate, the punctures large, crowded, the intervals strongly tuberculiform, post-humeral spine short, obtuse, the posterior twice as large as the median, stout, straight, both pairs pitchy-brown; body beneath, black, the two basal segments granulate; legs dark ferruginous, clothed with a few grayish hairs; antennæ ferruginous, the second joint of the funicle considerably longer than the third.

Length 5 lines.

*Hab.*—Western Australia.

The round prominent eye and the form of the prothorax afford a very trenchant diagnosis of this species. My specimen is probably somewhat worn, as the scales are unsymmetrically scattered on the two sides; except under a powerful lens, it appears to be almost glabrous.

### 32. *Catasarcus cicatricosus*.

Moderately ovate, black, with minute, more or less approximate, gray scales; head rather narrow, moderately convex in front, a small central carina only, followed below by a narrow groove; rostrum as long as the head, scarcely narrower than the front between the eyes; prothorax slightly transverse, the sides rounded, the base scarcely broader than the apex, not tuberculate, nearly glabrous and glossy above, the two transverse sulci nearly equidistant from each other and from the base and apex; scutellum indistinct; elytra covered above with gray or fawn-coloured scales, the side with a large oblong snowy white patch, above which and between the post-humeral and median spines is a large raised glabrous bifid scar-like mark, punctures above very small, those at the sides much larger, post-humeral spine black, long and slender, the median and posterior elongate, glossy reddish-ferruginous, the latter about a third longer; body beneath, dark brown; legs reddish, with whitish or silvery scales, more or less dispersed; antennæ pitchy, moderately scaly, the second joint of the funicle two thirds as long as the basal, club dark brown, pubescent.

Length  $3\frac{3}{4}$  lines.



*Hab.*—Champion Bay.

With the specimen from which the above description is taken, I associate, somewhat doubtfully, another more broadly ovate, with shorter rostrum, broader head, and posterior spines much shorter. They have both the raised blotch or mark which does not seem to occur again in any other species.

33. *Catasarcus scordalus*.

Moderately ovate, black, thinly covered with very minute whitish scales; front of the head flat, longer than the rostrum, with five short but very distinct carinæ, the outermost between the eye and the transverse sulcus; prothorax nearly twice as broad at the base as long, rather remotely foveate, the intervals slightly irregular and finely punctured, the scales very few; scutellum very small; elytra sulcate-punctate, the intervals tuberculiform, post-humeral spine reduced to a short thick tubercle, median and posterior rather small, widely apart on each side; body beneath, and legs, with few scales, the legs dull ferruginous; antennæ dark ferruginous, the funicle slender.

Length  $4\frac{1}{2}$  lines.

*Hab.*—Champion Bay.

A black dullish-looking species, like *C. funereus*, but, *inter alia*, with more slender posterior spines, and the post-humeral a mere tubercle.

34. *Catasarcus ericius*.

Narrowly ovate, black, with whitish scales principally confined to the impressed parts; head flat in front, with four carinæ, and with the rostrum densely covered with whitish scales; prothorax short, the sides slightly rounded, nearly straight from the middle to the base, not tuberculate above; elytra sulcate-punctate, the intervals distinctly tuberculate, post-humeral spine small, black, the median and posterior pitchy, the former acutely conical and about half the size of the latter; body beneath, black, covered with elongate whitish scales mixed with others which are round and much smaller; legs and antennæ brownish-ferruginous, thinly covered with whitish scales, the funicle with a few blackish setæ, club dark brown, pubescent.

Length  $3\frac{1}{2}$  lines.

*Hab.*—Champion Bay.

A small, rather narrow species, with comparatively slender posterior spines, and a prothorax without tubercles.

### Section 3.

Elytra with six or eight dorsal spines.\*

#### 35. *Catasarcus concretus*.

Shortly ovate, very convex, black, rather closely covered with fawn-coloured, mixed with white scales; head a little prominent in front but flattish above, a narrow median groove below a slight depression beneath the eye, but deeper and distinctly triangular below the transverse sulcus; prothorax small, rounded at the sides anteriorly, transverse grooves nearly obsolete, a darkish stripe on each side, a paler intermediate one; scutellum small, triangular; elytra seriate-punctate, the intervals here and there tuberculate, post-humeral spine stoutly conical, median and posterior spines rather short and stout, the latter not much larger than the former, in a longitudinal line with the median, and a little anterior to it, is another short thick spine; body beneath, with closely set scales; legs ferruginous, with the scales more dispersed and mingled with numerous black setaceous hairs; antennæ ferruginous, scaly, club dark brown.

Length 4 lines.

*Hab.*—Queensland.

A short convex species, readily known by its additional pair of medilateral spines, and by the absence of the basal spines (♀, ?), which all the following possess.

#### 36. *Catasarcus trapa*.

Pitchy-brown, rather thinly covered with pale grayish scales, but under the lens of a pale roscate hue; head nearly as in *C. tribulus* (*post*, p. 40); prothorax about a fourth broader than long, tolerably well rounded at the sides, very rugosely tuberculate; scutellum small, distinct, nearly equilaterally triangular; elytra rather

\* Perhaps this applies to the male sex only. Mr. Fry has a female specimen, evidently belonging to one of the species of this section, which is without the basal spines.

more convex, sulcate-punctate, the two rows outside the median and posterior spines with much smaller but with well-limited punctures, the interspaces above conically tuberculate, the tubercles, in general, small, post-humeral and basal spines nearly equal, the medialateral much the smallest of any; body beneath, legs, and antennæ reddish-pitchy, funicle elongate, the four penultimate joints gradually shorter, club unicolorous.

Length 5 lines.

*Hab.*—Champion Bay.

A rather dull-looking species, with smaller spines and the elytra more convex than usual.

### 37. *Catasarcus furfuraceus*.

Oblong ovate, pitchy, rather closely covered with opaque umber-brown scales, relieved on the elytra by paler or whitish lines, and thickly sprinkled above with an exudation of small sand-like grains; head as in *C. tribulus* (*post*, p. 40); prothorax slightly transverse, a little rounded at the sides, subtuberculate, but densely scaly above; scutellum indistinct; elytra subsulcate-punctate, the punctures more determinate at the sides, the second interspace from the suture with a row of conical tubercles, two or three only (but which are much larger) on the third interspace, a few also of small size in front of the basal spine, the basal post-humeral and medialateral spines of nearly equal size, the posterior much larger than the median, two or three short indeterminate white lines at the sides anteriorly; body beneath, and legs, closely covered with fawn-coloured scales, sprinkled with white; antennæ with scattered whitish scales, the funicle slender, club dark brown.

Length  $5\frac{1}{4}$  lines.

*Hab.*—Champion Bay.

Under a good lens, this species looks as if it had been sprinkled with a fine sand; which does not appear to be soluble in water, but breaks up readily under a little pressure.

### 38. *Catasarcus lepidus*.

Oblong ovate, black, closely covered on the raised portions with fawn-coloured scales, intermingled with

whitish on the head and prothorax, and on the elytra with lines of pearly white, having a slightly roseate tint; head nearly as in *C. tribulus*; prothorax moderately transverse, the sides slightly rounded, deeply scored above by short irregular lines, having a reticulate appearance; scutellum small, triangular; elytra strongly sulcate-punctate, the third and fourth interspace on the anterior half with eight or ten conical tubercles, some deeply bifid, no tubercle at the shoulders, the base not broader than the base of the prothorax, post-humeral spine moderately conical, basal and medialateral equal, the posterior twice as large as the median, all dark glossy brown; body beneath, and legs, closely covered with white scales, sprinkled with fawn, the legs with numerous black setæ; antennæ dark brown, scaly and setiferous, club dark brown, pubescent.

Length 5 lines.

*Hab.*—Champion Bay.

A pretty species, the black rows of punctures on the elytra contrasting agreeably with the lighter lines of scales.

### 39. *Catasarcus tribulus*.

Black, with somewhat dispersed scales, smoke-coloured and white, the latter condensed in lines on the elytra; front of the head convex, shorter than the rostrum, a narrow deep central groove; prothorax moderately transverse, rounded at the sides, roughly tuberculate above; scutellum small, covered with white scales; elytra rather more convex, strongly sulcate-punctate, the intervals between the dorsal spines with several stout conical tubercles, as well as a line of smaller tubercles between the suture and first row of punctures, the post-humeral medialateral and basal spines nearly of equal size, the median and posterior pair larger and nearly equal, the shoulder produced into a short conical porrect tubercle, the white lines confined to the anterior half, and principally at the sides; body beneath, and legs, with whitish scales; antennæ reddish-pitchy, funicle long, the basal joint nearly twice as long as the second.

Length  $5\frac{1}{2}$  lines.

*Hab.*—Champion Bay.

This is the only species known to me with a line of tubercles close to the suture.

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